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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

SONOS, INC.,
Plaintiff,
vs.
GOOGLE LLC,
Defendant

CASE NO. 3:20-cv-06754-WHA
Related to CASE NO. 3:21-cv-07559-WHA

**CHART B TO GOOGLE LLC'S REVISED
OMNIBUS ADMINISTRATIVE MOTION
TO FILE UNDER SEAL PURSUANT TO
THE COURT'S ORDER RE NEW
MOTIONS TO SEAL (DKT. 846)**

CHART B: Cloud Queue-Related Technical Information

Dkt.	Document	Portions to be Sealed	Narrowing from Original Request to Seal	Narrowing from Revised Request to Seal	Basis for Sealing ¹
410-6	Exhibit 1 to Moss Declaration (Part 1)	Portions outlined in green boxes	Removed request to seal description of queue in YouTube apps in Cast framework from internal Google documents, removed references to and discussion of operation of “Watch Next” queue, operation of playback device when user initiates local playback on YouTube apps, media items contained in “Watch Next” queue, description of functions of YouTube app when a device receives input for taking over playback responsibility in MDx context, description of stream transfer functionality and technical operation of stream transfer functionality from	Further removed requests to seal source code file paths, source code file names and descriptions of certain parameters.	Pages 17-27, 49-63, 68-73: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google’s source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google’s WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver device, (4) YouTube functionality related to receiving and processing transport controls, and (5) YouTube functionality related to Stream Transfer. In addition, these flows also reveal the hierarchy of

¹ All pin cites refer to internal document page numbers and exhibits.

			internal Google documents.		Google's source code, how it is organized, how error checking is implemented, how much space Google devotes to each function and activity in the code, and Google's general process for source code organization and hierarchy. Public disclosure of this information would divulge Google's highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
410-7	Exhibit 2 to Moss Declaration (Part 2)	Portions outlined in green boxes	Removed request to seal excerpts of internal Google documents regarding MediaRouteButton/Cast	Further removed requests to seal source code file paths, source code file names and descriptions of certain parameters.	Pages 80-85, 93-95, 109-119, 144-146: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google's

		<p>icon, references to and discussion of operation of “Watch Next” queue, discussion of use of MDx servers for transmission of “setPlaylist” messages in casting functionality, and the discussion of and excerpt from internal Google documents regarding launch process.</p>	<p>source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google’s WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver device, (4) YouTube functionality related to receiving and processing transport controls, and (5) YouTube functionality related to Stream Transfer. In addition, these flows also reveal the hierarchy of Google’s source code, how it is organized, how error checking is implemented, how much space Google devotes to each function and activity in the code, and Google’s general process for source code organization and hierarchy.</p> <p>Public disclosure of this information would divulge Google’s highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive</p>
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					advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
410-8	Exhibit 4 to Moss Declaration	Portions outlined in green boxes	Removed request to seal references to the Cast protocol, variables passed to the device as part of the join_group command, and general descriptions of: the leader election process, the launch process including launch at follower devices, available grouping functionalities, MDx session instantiation, and queue usage in the MDx context.	Further removed request to seal description of source code operations, functions, and file names for the grouping and casting functionalities.	Images on pages 20 and 21: Contain the parameters in a setPlaylist message that were not at issue in the litigation and which pertain to security and verification, the public disclosure of which could harm Google's business. Google has narrowly tailored its request and is not seeking to redact parameters that were at issue in the litigation, such as the videoId, currentTime, and listID.

438-3	Exhibit 11 to Moss Declaration	Portions outlined in green boxes	Removed request to seal general descriptions of source code for “autoplay” feature and MDx session instantiation, and queue usage in the MDx context.	Further removed request to seal source code file paths for casting functionality and certain parameters in a setPlaylist message that were discussed in the Court’s orders.	Images on pages 11 and 12: Contain the parameters in a setPlaylist message that were not at issue in the litigation and which pertain to security and verification, the public disclosure of which could harm Google’s business. Google has narrowly tailored its request and is not seeking to redact parameters that were at issue in the litigation, such as the videoId, currentTime, and listID.
438-4	Exhibit 12 to Moss Declaration	Portions outlined in green boxes	Removed request to seal entirety of document.	Further removed request to seal general discussion of firmware code implementing Cast protocols, certain testimony regarding meaning of code, and source code file names.	Pages 74, 114, 165, 168-175, 181-183, 195, 196, Contains testimony from Google witness explaining the operation of specific source code lines for casting and stream transfer functionalities of YouTube apps, the public disclosure of which would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google’s highly-confidential and proprietary information.
467-3	Exhibit 1 to Kaplan Declaration	Portions outlined in green boxes	Removed request to seal document in entirety.	Further removed request to seal source code file paths for YouTube products for casting functionality.	Pages 17-27, 49-63, 68-73, 80-85, 93-95, 109-119, 144-146: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google’s source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may

				<p>intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google's WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver device, (4) YouTube functionality related to receiving and processing transport controls, and (5) YouTube functionality related to Stream Transfer. In addition, these flows also reveal the hierarchy of Google's source code, how it is organized, how error checking is implemented, how much space Google devotes to each function and activity in the code, and Google's general process for source code organization and hierarchy.</p> <p>Public disclosure of this information would divulge Google's highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for</p>
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					maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
467-4	Exhibit 2 to Kaplan Declaration	Portions outlined in green boxes	Removed request to seal entirety of document.	Further removed request to seal source code file paths.	Pages 75-79: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google's source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google's WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver

					<p>device; and (4) YouTube functionality related to how the Playlist Service and the Playlist Document Service operate for retrieval and playback of media on a Hub device.</p> <p>Public disclosure of this information would divulge Google's highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.</p>
475-2	Exhibit B	Portions outlined in green boxes	Removed request to seal description of how an MDx server operates when a user initiates a Cast session to a playback device, including the use of	Further removed request to seal descriptions of how the MDx server generates and sends "setPlaylist" messages to playback devices, queue usage in the MDx context and	Image on page 38: Contains information from an internal Google document that is marked "Confidential & Proprietary" which discloses highly confidential information regarding the YouTube infrastructure, including the transmission, storage and processing of security tokens and

		<p>“setPlaylist” messages, references to the Cast protocol and parameters used therein, source code file paths, discussion of the role of Bandaid servers in the casting process, the operation of “Mapping Service” to identify servers from which the receive should request content, queue usage in the MDx context, and general description of the operation of source code for Hub devices when casting.</p>	<p>related source code files, references to “Onesie,” and descriptions of how queues would work after the implementation of the “Streaming Watch” feature currently under development.</p>	<p>credentials whose functionality and operation was not at issue in this case.</p> <p>Image on page 41: Describes the parameters in a setPlaylist message that were not at issue and which pertain to security and verification, the public disclosure of which could harm Google’s business. Google has narrowly tailored its request and is not seeking to redact parameters that were at issue in the litigation, such as the videoId, currentTime, and listID</p> <p>Images and related description on page 51 and 53: Contain information from internal Google documents that are marked “Confidential & Proprietary” disclosing highly confidential material regarding the numbers and locations of servers in Google’s content delivery network, the caching hierarchy of servers in the content delivery network, and information regarding how requests for media are directed across the servers in the content delivery network. Public disclosure of this information would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google’s highly-confidential and proprietary information and could potentially jeopardize the security of Google’s server networks.</p>
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					<p>Image on page 54: Contains information from a Google document marked “confidential,” identifying and describing the format and fields within a request to retrieve a YouTube media item. Public disclosure of this information could pose a security risk to Google.</p> <p>Image on page 153: Contains non-public information regarding the fields and format within a Onesie response, including fields relating to security keys. Although the general process by which Onesie requests a media item from a Onesie agent was discussed in public docket entries, the specific fields and format within a Onesie agent that are shown in this image were not. Public disclosure of this information could pose a security risk to Google.</p>
482-13	Exhibit 22 to Google’s MSJ	Entire document	None	None	Internal Google document detailing design and operation of casting to MDx via YouTube Music, the public disclosure of which would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google’s highly-confidential and proprietary information.
488-7	Exhibit 5 to Richter Declaration	Portions outlined in green boxes	Removed request to seal description of queue in YouTube apps in Cast	Further removed requests to seal source code file paths, source code file	Pages 17-27: Contain highly confidential flows of source code function calls and source code hierarchy information that

		<p>framework from internal Google documents, references to and discussion of operation of “Watch Next” queue, operation of playback device when user initiates local playback on YouTube apps, media items contained in “Watch Next” queue, and description of operation of auto play functionality from internal Google documents,</p>	<p>names and descriptions of certain parameters.</p>	<p>Google does not publicly reveal, which discloses Google’s source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google’s WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver device, (4) YouTube functionality related to receiving and processing transport controls, and (5) YouTube functionality related to Stream Transfer. In addition, these flows also reveal the hierarchy of Google’s source code, how it is organized, how error checking is implemented, how much space Google devotes to each function and activity in the code, and Google’s general process for source code organization and hierarchy.</p> <p>Public disclosure of this information would divulge Google’s highly confidential and proprietary source code architecture and</p>
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					functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
488-10	Exhibit 8 to Richter Declaration	Entire document	None	None	Internal Google document providing confidential architecture and implementation details regarding playback operations in YouTube Music, including descriptions of how various back-end YouTube services issue and process remote procedure calls to obtain information that is returned to a YouTube Music client under different scenarios for media playback. Information regarding Google's back-end YouTube infrastructure and remote procedure calls that are made by this back-end infrastructure is confidential, and the public disclosure of this information could pose a security threat and

					would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google's highly-confidential and proprietary information.
491-5	Exhibit 8 to Hefazi Declaration	Portions outlined in green boxes	Removed request to seal operation of casting functionality in YouTube apps using "setPlaylist" message and MDx protocol.	None	Page 6: Contains reference to personal home address of Google employee, the public disclosure of which may cause privacy and/or security issues for the employee and his family.
491-7	Exhibit 10 to Hefazi Declaration	Entire document	None	None	Internal Google document providing confidential architecture and implementation details regarding playback operations in YouTube Music, including descriptions of how various back-end YouTube services issue and process remote procedure calls to obtain information that is returned to a YouTube Music client under different scenarios for media playback. Information regarding Google's back-end YouTube infrastructure and remote procedure calls that are made by this back-end infrastructure is confidential, and the public disclosure of this information could pose a security threat and would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google's highly-confidential and proprietary information.

491-9	Exhibit 19 to Hefazi Declaration	Portions outlined in green boxes	Removed request to seal references to “Shared Queue” or “Remote Queue,” source code file paths, and source code file names.	None	Page 88: Contains source code for MDx queue functionality, the public disclosure of which would divulge Google’s highly confidential and proprietary source code that competitors could use to gain a competitive advantage in developing same or similar products because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation
491-11	Exhibit 21 to Hefazi Declaration	Portions outlined in green boxes	Removed request to seal discussion regarding the operation of “Mapping Service” to identify servers from which the receive should request content, source code file paths, discussion of comments in source code regarding storage of queue when casting for YouTube and GPM apps, and general descriptions of cloud queue feature from internal Google documents.	Included request to seal confidential information regarding Google’s content delivery network.	Images on page 37-39: Contains information from internal Google documents that are marked “Confidential & Proprietary” disclosing highly confidential material regarding the numbers and locations of servers in Google’s content delivery network, the caching hierarchy of servers in the content delivery network, and information regarding how requests for media are directed across the servers in the content delivery network. Public disclosure of this information would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google’s highly-confidential and proprietary information and could potentially jeopardize the security of Google’s server networks.
491-14	Exhibit 25 to Hefazi Declaration	Entire document	None	None	Internal Google document detailing the operation, design, and architecture of Streaming Watch functionality for casting,

					as well as analysis of potential issues with and employee commentary on the new solution. The public disclosure of which would competitively harm Google by giving competitors an advantage in developing similar products by providing them with Google's highly-confidential and proprietary information.
502-4	Exhibit 1 to Hefazi Declaration	Portions outlined in green boxes	Removed request to seal excerpts from internal Google documents regarding Get Watch Next and "Watch Next" queue, discussions of list of media items in "Watch Next Queue," description of operation of YouTube app for playback of queues when transferring playback, excerpts from internal documents regarding illustration of "client-side expansion" process when Casting YouTube Music, operation of setPlaylist message and MDx servers for playback, general description of version 3 of MDx protocol, and excerpts from internal Google	Further removed request to seal source code file paths.	Pages 75, 76, 79: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google's source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google's WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver device; and (4) YouTube functionality related to how the Playlist Service and the Playlist Document Service operate for

			documents regarding autoplay feature for YouTube apps.		retrieval and playback of media on a Hub device. Public disclosure of this information would divulge Google's highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
506-1	Exhibit 1 to Ma Declaration	Portions outlined in green boxes	Removed request to seal reference to "PlaylistService," description of usage of cloud servers, including MDx servers, during casting and playing back content on YouTube apps, description of "auto play" feature from	Further removed request to seal descriptions of source code comments and operations, descriptions of how the PlaylistDocument Service and WatchNext service operate in the context of queue playback in the MDx context, descriptions of how Hub	Page 77-79: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google's source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code,

		<p>internal Google documents, description of Hub devices when playing back media and requirements when casting, deposition testimony from Google witnesses regarding storage of YouTube app,</p>	<p>devices operate when casting using stream transfer, source code file paths, and references to Casting protocol</p>	<p>including for YouTube functionality related to how Google's WatchNext servers retrieve and interact with other backend servers (including the Playlist Document Service and Playlist Service) when receiving a request for media items from a client device. In addition, these flows also reveal the hierarchy of Google's source code, how it is organized, how error checking is implemented, how much space Google devotes to each function and activity in the code, and Google's general process for source code organization and hierarchy.</p> <p>Public disclosure of this information would divulge Google's highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of</p>
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					copyrighted or proprietary content, among other issues.
506-5	Exhibit 5 to Ma Declaration	Portions outlined in green boxes	Removed request to seal description of queue in YouTube apps in Cast framework from internal Google documents, references to and discussion of operation of “Watch Next” queue, operation of playback device when user initiates local playback on YouTube apps, media items contained in “Watch Next” queue, and description of operation of auto play functionality from internal Google documents,	Further removed requests to seal source code file paths, source code file names and descriptions of certain parameters.	Pages 17-27: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google’s source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google’s WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; (3) YouTube functionality related to how YouTube receivers are discover and how media playback is Cast to a YouTube receiver device, (4) YouTube functionality related to receiving and processing transport controls, and (5) YouTube functionality related to Stream Transfer. In addition, these flows also reveal the hierarchy of Google’s source code, how it is organized, how error checking is implemented, how much space Google devotes to each function and activity in the code, and

					Google's general process for source code organization and hierarchy. Public disclosure of this information would divulge Google's highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google's proprietary source code information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
506-9	Exhibit 11 to Ma Declaration	Portions outlined in green boxes	Removed request to seal general descriptions of source code for "autoplay" feature and MDx session instantiation, and queue usage in the MDx context.	Further removed request to seal source code file paths for casting functionality and certain parameters in a setPlaylist message that were discussed in the Court's orders.	Images on pages 11 and 12: Contain the parameters in a setPlaylist message that were not at issue in the litigation and which pertain to security and verification, the public disclosure of which could harm Google's business. Google has narrowly tailored its request and is not seeking to redact parameters that were at issue in the litigation, such as the videoId, currentTime, and listID.

546-3	Revised Sealed Dkt. 210-3	Portions outlined in red boxes	None	<p>Removed request to seal descriptions of how a setPlaylist message, including its videoId and playlistId parameters, is transmitted to and processed by MDx servers and YouTube receiver applications, discussion of source code that implemented the Shared Queue on the MDx server, and descriptions of how Google Play Music operates to playback a cloud queue.</p>	<p>Image on pages 15 and 18: Contain information from an internal Google document that is marked “Confidential & Proprietary” which discloses highly confidential information regarding the YouTube infrastructure, including the transmission, storage and processing of security tokens and credentials whose functionality and operation was not at issue in this case.</p> <p>Image on page 16: Describes the parameters in a setPlaylist message that were not at issue and which pertain to security credentials, the public disclosure of which could harm Google’s business. Google has narrowly tailored its request and is not seeking to redact parameters that were at issue in the litigation, such as the videoId, currentTime, and listID.</p> <p>Source code on page 31: Contains details regarding the process Google Play Music uses to retrieve and playback cloud queue items and identifies the data structures and methods involved in this process. Although the general process for retrieving and playing back cloud queue items were discussed in public filings and hearings, the source code implementation of the same was not disclosed and remains Google’s confidential and competitively sensitive information.</p>
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629-3	Attachment C to Ma Declaration	Portions outlined in blue boxes on slides 4, 9	Removed request to seal general description of playback on Cast-enabled devices, references to “Playlist Service,” “Magic Playlist,” and “BigTable,” description of operation of source code for autoplay functionality, general description of Google’s non-infringing alternatives, description of operation of YouTube apps when casting using MDx protocol, and discussion of storage of data when creating group.	Further removed request to seal general descriptions of source code for WatchNext response, source code file paths, discussion of use of cloud servers in Tungsten/NexusQ products, and discussion of operation of Onesie functionality.	Slides 4, 9: Contain highly confidential flows of source code function calls and source code hierarchy information that Google does not publicly reveal, which discloses Google’s source code functionality because the identified functions and source code structures include their descriptive names indicating what each function and structure may intend to accomplish in the source code, including for the following functionalities: (1) YouTube functionality related to retrieval and playback of media on a client device; (2) YouTube functionality related to how Google’s WatchNext servers retrieve and interact with other backend servers when receiving a request for media items from a client device; and (3) YouTube functionality related to how the Playlist Service operates for retrieval and playback of media on a Hub device. Public disclosure of this information would divulge Google’s highly confidential and proprietary source code architecture and functionality, which could be used by competitors to gain a competitive advantage that Google has in the marketplace because, generally, properly structured and efficient source code is superior to source code that is not, both for maintenance and in operation. Further, revealing Google’s proprietary source code
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				information would pose an increased security risk to Google by exposing the workings and flows of Google source code such that hostile parties may be able to learn how to exploit portions of the source code, potentially resulting in privacy issues for consumers, unauthorized use of copyrighted or proprietary content, among other issues.
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